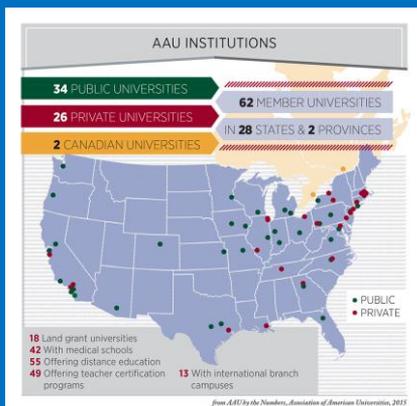


Thoughts on Graduate Education, David E. Daniel, UT System



The AAU Institutions:

- Are home to 37% of all winners of Nobel Prizes worldwide
- Are home to 76% of all members of the National Academy of Sciences
- Are awarded 59% of all Federal R&D grants and contracts that are directed to U.S. colleges and universities

Emerging Research Universities in Texas:

- UT Arlington
- UT Dallas
- UT El Paso
- UT San Antonio
- Texas State
- Texas Tech
- Univ. of Houston
- Univ. of North Texas

Where Texas Stands on Some Key Metrics:



State	Population (% of U.S.)	AAU Institutions per 10 M People	National Academy of Sciences Members (% of U.S.)	Annual Federal R&D Expenditures (% of U.S.)	Annual Federal R&D Expenditures per Capita	Venture Capital Investment (% of U.S.)	Venture Capital Investment per Capita
California	12.0 %	2.3	31.6 %	14.2 %	\$404	57 %	\$865
Massachusetts	2.0 %	4.4	15.0 %	5.6 %	\$923	15 %	\$835
Texas	8.5 %	1.1	3.4 %	4.2 %	\$171	4.6 %	\$43
NATIONAL AVERAGE	-	1.9	-	-	\$387	-	\$85

Sources:
 U.S. Census Bureau (population)
 National Academy of Sciences web directory (NAS members)
 National Science Foundation (research expenditures)
 National Venture Capital Association (2016 yearbook for VC investments)

Inflow and Outflow of High-School Graduates Attending College in Other States



Texas:

- Attracts 2,750 high-school graduates from other states to attend 4-year colleges and universities in Texas
- Sends 11,119 Texas high-school graduates to attend 4-year colleges in other states
- **Net Brain Drain: 8,369 students per year lost to other states**
- 4th worst in the U.S.
- Thank you Illinois and New Jersey, the worst two states!

Why?

Source: "The Great Out-of-State Migration: Where Students Go," New York Times, August 16, 2016. <http://www.nytimes.com/interactive/2016/08/26/us/college-student-migration.html?emc=eta1>

The Keys to Future Prosperity?



“Good-paying jobs don’t come from bailouts. They come from start-ups. And where to start-ups come from? They come from smart, creative, inspired risk-takers. How do we get more of those? There are only two ways: grow more by *improving our schools* or import more by *recruiting talented immigrants.*” *Thomas Friedman*